

SEQUENCE LISTING

<110> KUFER, PETER
 LENKKERI-SCHUTZ, ULLA
 LUTTERBUSE, RALF
 KOHLEISEN, BIRGIT

<120> LESS IMMUNOGENIC BINDING MOLECULES

<130> 028622-0155

<140> 10/588,734

<141> 2006-08-08

<150> PCT/EP05/001573

<151> 2005-02-16

<150> EP 04003445.6

<151> 2004-02-16

<160> 40

<170> PatentIn version 3.3

<210> 1

<211> 318

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
 OKT3 light chain

<400> 1

gacatccaga	tgacccagtc	tccatcctcc	ctgtctgcat	ctgtaggaga	cagagtcacc	60
atcacttgca	gtgcaagttc	aagcgtaagc	tacatgaatt	ggtatcagca	gacaccaggg	120
aaagccccta	agagatggat	ctatgacaca	tccaaattgg	cttctggggg	cccatcaagg	180
ttcagtgcca	gtggatctgg	gacagattac	actttcacca	tcagcagtct	gcaacctgaa	240
gatattgcaa	cttactactg	tcaacagtgg	agtagtaacc	cttttacttt	tggccagggg	300
accaagctgc	agatcacc					318

<210> 2

<211> 106

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
 OKT3 VL

<400> 2

Asp	Ile	Gln	Met	Thr	Gln	Ser	Pro	Ser	Ser	Leu	Ser	Ala	Ser	Val	Gly
1				5				10					15		

Asp	Arg	Val	Thr	Ile	Thr	Cys	Ser	Ala	Ser	Ser	Ser	Val	Ser	Tyr	Met
			20					25					30		

Asn Trp Tyr Gln Gln Thr Pro Gly Lys Ala Pro Lys Arg Trp Ile Tyr
 35 40 45

Asp Thr Ser Lys Leu Ala Ser Gly Val Pro Ser Arg Phe Ser Gly Ser
 50 55 60

Gly Ser Gly Thr Asp Tyr Thr Phe Thr Ile Ser Ser Leu Gln Pro Glu
 65 70 75 80

Asp Ile Ala Thr Tyr Tyr Cys Gln Gln Trp Ser Ser Asn Pro Phe Thr
 85 90 95

Phe Gly Gln Gly Thr Lys Leu Gln Ile Thr
 100 105

<210> 3
 <211> 30
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic
 oligonucleotide

<400> 3
 agagcaagtt caagcgtaag ctacatgaat

30

<210> 4
 <211> 10
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic
 peptide

<400> 4
 Arg Ala Ser Ser Ser Val Ser Tyr Met Asn
 1 5 10

<210> 5
 <211> 21
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic
 peptide

<400> 5
gacacatcca aagtggcttc t 21

<210> 6
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
peptide

<400> 6
Asp Thr Ser Lys Val Ala Ser
1 5

<210> 7
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7
caacagtga gtagtaaccc tctcact 27

<210> 8
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
peptide

<400> 8
Gln Gln Trp Ser Ser Asn Pro Leu Thr
1 5

<210> 9
<211> 318
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
CD3 VL

<400> 9
gacatccaga tgacccagtc tccatcctcc ctgtctgcat ctgtaggaga cagagtcacc 60
atcacttgca gagcaagttc aagcgtaagc tacatgaatt ggtatcagca gacaccaggg 120
aaagccccta agagatggat ctatgacaca tccaaagtgg cttctggggg cccatcaagg 180

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ttcagtggca gtggatctgg gacagattac actttcacca tcagcagtct gcaacctgaa 240
gatattgcaa cttactactg tcaacagtgg agtagtaacc ctctcacttt tggccagggg 300
accaagctgc agatcacc                                     318

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<210> 10
 <211> 106
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic
 CD3 VL

<400> 10
 Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
 1 5 10 15

Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Ser Ser Val Ser Tyr Met
 20 25 30

Asn Trp Tyr Gln Gln Thr Pro Gly Lys Ala Pro Lys Arg Trp Ile Tyr
 35 40 45

Asp Thr Ser Lys Val Ala Ser Gly Val Pro Ser Arg Phe Ser Gly Ser
 50 55 60

Gly Ser Gly Thr Asp Tyr Thr Phe Thr Ile Ser Ser Leu Gln Pro Glu
 65 70 75 80

Asp Ile Ala Thr Tyr Tyr Cys Gln Gln Trp Ser Ser Asn Pro Leu Thr
 85 90 95

Phe Gly Gln Gly Thr Lys Leu Gln Ile Thr
 100 105

<210> 11
 <211> 357
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic
 CD3 VH

<400> 11
 caggtgcagc tgggtgcagtc tgggggaggc gtgggtccagc ctgggaggtc cctgagactc 60
 tcctgtaagt cttctgggata caccttcact aggtatacga tgactgggt cgcacaggct 120
 ccagggaagg ggctggagtg gattggatac ataaatccta gccgtgggta tactaattat 180
 aatcagaagg tgaaggaccg attcaccatc tccagagaca actccaagaa cacgccttt 240
 ctgcaaatgg acagcctgag acccgaggac acgggtgtgt atttctgtgc gagatattat 300

gatgatcatt actgccttga ctactggggc cagggcaccc cggtcaccgt ctccctca 357

<210> 12

<211> 119

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
CD3 VH

<400> 12

Gln Val Gln Leu Val Gln Ser Gly Gly Gly Val Val Gln Pro Gly Arg
1 5 10 15

Ser Leu Arg Leu Ser Cys Lys Ser Ser Gly Tyr Thr Phe Thr Arg Tyr
20 25 30

Thr Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Ile
35 40 45

Gly Tyr Ile Asn Pro Ser Arg Gly Tyr Thr Asn Tyr Asn Gln Lys Val
50 55 60

Lys Asp Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Ala Phe
65 70 75 80

Leu Gln Met Asp Ser Leu Arg Pro Glu Asp Thr Gly Val Tyr Phe Cys
85 90 95

Ala Arg Tyr Tyr Asp Asp His Tyr Cys Leu Asp Tyr Trp Gly Gln Gly
100 105 110

Thr Pro Val Thr Val Ser Ser
115

<210> 13

<211> 729

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
CD3 VH-VL

<400> 13

caggtgcagc tgggtgcagtc tgggggaggc gtgggtccagc ctgggaggtc cctgagactc 60
tctgtgaagt cttctggata caccttcact aggtatacga tgcactgggt ccgccaggct 120
ccaggaagg ggctggagtg gattggatac ataaatccta gccgtgggta tactaattat 180

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aatcagaagg tgaaggaccg attcaccatc tccagagaca actccaagaa cacggccttt 240
ctgcaaattg acagcctgag acccgaggac acgggtgtgt atttctgtgc gagatattat 300
gatgatcatt actgccttga ctattggggc cagggcaccg cggtcaccgt ctcctcagtc 360
gaagggtgaa gtggagggttc tgggtggaagt ggagggttcag gtggagtgga cgacatccag 420
atgacccagt ctccatcctc cctgtctgca tctgtaggag acagagtcac catcacttgc 480
agagcaagtt caagcgtaag ctacatgaat tggatcagc agacaccagg gaaagcccct 540
aagagatgga tctatgacac atccaaagtg gcttctgggg tcccatcaag gttcagtggc 600
agtggatctg ggacagatta cactttcacc atcagcagtc tgcaacctga agatattgca 660
acttactact gtcaacagtg gagtagtaac cctctcactt ttggccaggg gaccaagctg 720
cagatcacc 729

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<210> 14
 <211> 243
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic
 CD3 VH-VL

<400> 14
 Gln Val Gln Leu Val Gln Ser Gly Gly Gly Val Val Gln Pro Gly Arg
 1 5 10 15

Ser Leu Arg Leu Ser Cys Lys Ser Ser Gly Tyr Thr Phe Thr Arg Tyr
 20 25 30

Thr Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Ile
 35 40 45

Gly Tyr Ile Asn Pro Ser Arg Gly Tyr Thr Asn Tyr Asn Gln Lys Val
 50 55 60

Lys Asp Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Ala Phe
 65 70 75 80

Leu Gln Met Asp Ser Leu Arg Pro Glu Asp Thr Gly Val Tyr Phe Cys
 85 90 95

Ala Arg Tyr Tyr Asp Asp His Tyr Cys Leu Asp Tyr Trp Gly Gln Gly
 100 105 110

Thr Pro Val Thr Val Ser Ser Val Glu Gly Gly Ser Gly Gly Ser Gly
 115 120 125

Gly Ser Gly Gly Ser Gly Gly Val Asp Asp Ile Gln Met Thr Gln Ser
 130 135 140

Pro Ser Ser Leu Ser Ala Ser Val Gly Asp Arg Val Thr Ile Thr Cys
 145 150 155 160

Arg Ala Ser Ser Ser Val Ser Tyr Met Asn Trp Tyr Gln Gln Thr Pro
 165 170 175

Gly Lys Ala Pro Lys Arg Trp Ile Tyr Asp Thr Ser Lys Val Ala Ser
 180 185 190

Gly Val Pro Ser Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Tyr Thr
 195 200 205

Phe Thr Ile Ser Ser Leu Gln Pro Glu Asp Ile Ala Thr Tyr Tyr Cys
 210 215 220

Gln Gln Trp Ser Ser Asn Pro Leu Thr Phe Gly Gln Gly Thr Lys Leu
 225 230 235 240

Gln Ile Thr

<210> 15
 <211> 372
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic
 CD19 VH

<400> 15
 caggtgcagc tgcagcagtc tggggctgag ctggtgaggc ctgggtcctc agtgaagatt 60
 tcctgcaagg cttctggcta tgcattcagt agctactgga tgaactgggt gaagcagagg 120
 cctggacagg gtcttgagtg gattggacag atttggcctg gagatggtga tactaactac 180
 aatggaaagt tcaagggtaa agccactctg actgcagacg aatcctccag cacagcctac 240
 atgcaactca gcagcctagc atctgaggac tctgcggtct atttctgtgc aagacggggag 300
 actacgacgg taggccgtta ttactatgct atggactact ggggccaagg gaccacgggc 360
 accgtctcct cc 372

<210> 16
 <211> 124
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic
 CD19 VH

<400> 16

Gln Val Gln Leu Gln Gln Ser Gly Ala Glu Leu Val Arg Pro Gly Ser
 1 5 10 15

Ser Val Lys Ile Ser Cys Lys Ala Ser Gly Tyr Ala Phe Ser Ser Tyr
 20 25 30

Trp Met Asn Trp Val Lys Gln Arg Pro Gly Gln Gly Leu Glu Trp Ile
 35 40 45

Gly Gln Ile Trp Pro Gly Asp Gly Asp Thr Asn Tyr Asn Gly Lys Phe
 50 55 60

Lys Gly Lys Ala Thr Leu Thr Ala Asp Glu Ser Ser Ser Thr Ala Tyr
 65 70 75 80

Met Gln Leu Ser Ser Leu Ala Ser Glu Asp Ser Ala Val Tyr Phe Cys
 85 90 95

Ala Arg Arg Glu Thr Thr Thr Val Gly Arg Tyr Tyr Tyr Ala Met Asp
 100 105 110

Tyr Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser
 115 120

<210> 17

<211> 333

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
 CD19 VL

<400> 17

gatatccagc	tgacccagtc	tccagcttct	ttggctgtgt	ctctagggca	gagggccacc	60
atctcctgca	aggccagcca	aagtgttgat	tatgatgggtg	atagttattt	gaactgggtac	120
caacagattc	caggacagcc	acccaaactc	ctcatctatg	atgcatccaa	tctagtttct	180
gggatccac	ccaggtttag	tggcagtggg	tctgggacag	acttcaccct	caacatccat	240
cctgtggaga	aggtggatgc	tgcaacctat	cactgtcagc	aaagtactga	ggatccgtgg	300
acgttcggtg	gagggaccaa	gctcgagatc	aaa			333

<210> 18

<211> 111

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
CD19 VL

<400> 18

Asp	Ile	Gln	Leu	Thr	Gln	Ser	Pro	Ala	Ser	Leu	Ala	Val	Ser	Leu	Gly
1				5					10					15	

Gln	Arg	Ala	Thr	Ile	Ser	Cys	Lys	Ala	Ser	Gln	Ser	Val	Asp	Tyr	Asp
			20					25					30		

Gly	Asp	Ser	Tyr	Leu	Asn	Trp	Tyr	Gln	Gln	Ile	Pro	Gly	Gln	Pro	Pro
		35					40					45			

Lys	Leu	Leu	Ile	Tyr	Asp	Ala	Ser	Asn	Leu	Val	Ser	Gly	Ile	Pro	Pro
	50					55					60				

Arg	Phe	Ser	Gly	Ser	Gly	Ser	Gly	Thr	Asp	Phe	Thr	Leu	Asn	Ile	His
65					70					75					80

Pro	Val	Glu	Lys	Val	Asp	Ala	Ala	Thr	Tyr	His	Cys	Gln	Gln	Ser	Thr
				85					90					95	

Glu	Asp	Pro	Trp	Thr	Phe	Gly	Gly	Gly	Thr	Lys	Leu	Glu	Ile	Lys
			100					105					110	

<210> 19

<211> 1504

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
anti-CD3

<400> 19

tgtacactcc	gatataccagc	tgacccagtc	tccagcttct	ttggctgtgt	ctctagggca	60
gagggccacc	atctcctgca	aggccagcca	aagtgttgat	tatgatggtg	atagttattt	120
gaactggtac	caacagattc	caggacagcc	acccaaactc	ctcatctatg	atgcatccaa	180
tctagtttct	gggatcccac	ccaggtttag	tggcagtggg	tctgggacag	acttcaccct	240
caacatccat	cctgtggaga	aggtggatgc	tgcaacctat	cactgtcagc	aaagtactga	300
ggatccgtgg	acgttcgggtg	gagggaccaa	gctcgagatc	aaagggtggtg	gtggttcttg	360
cggcggcggc	tccggtgggtg	gtggttctca	ggtgcagctg	cagcagctctg	gggctgagct	420
ggtgaggcct	gggtcctcag	tgaagatttc	ctgcaaggct	tctggctatg	cattcagtag	480
ctactggatg	aactgggtga	agcagaggcc	tggaacagggt	cttgagtggg	ttggacagat	540
ttggcctgga	gatggtgata	ctaactacaa	tggaagtttc	aagggtaaaag	ccactctgac	600
tgacagacga	tcctccagca	cagcctacat	gcaactcagc	agcctagcat	ctgaggactc	660
tgcggtctat	ttctgtgcaa	gacgggagac	tacgacggtg	ggccgttatt	actatgctat	720
ggactactgg	ggccaaggga	ccacggtcac	cgtctcctcc	ggaggtggtg	gctcccaggt	780
gcagctgggtg	cagtctgggg	gagggcgtgg	ccagcctggg	aggtccctga	gactctcctg	840
taagtcttct	ggatacacct	tcactaggtg	tacgatgcac	tggtgccgcc	aggctccagg	900

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gaaggggctg gagtggattg gatacataaa tcctagccgt gggtatacta attataatca 960
gaaggtgaag gaccgattca ccatctccag agacaactcc aagaacacgg cttttctgca 1020
aatggacagc ctgagacccg aggacacggg tgtgtatttc tgtgcgagat attatgatga 1080
tcattactgc cttgactatt ggggccaggg caccgcggtc accgtctcct cagtcgaagg 1140
tggaagtgga gggttctggtg gaagtggagg ttcaggtgga gtggacgaca tccagatgac 1200
ccagtctcca tcctccctgt ctgcatctgt aggagacaga gtcaccatca cttgcagagc 1260
aagttcaagc gtaagctaca tgaattggta tcagcagaca ccagggaag cccctaagag 1320
atggatctat gacacatcca aagtggcttc tggggtccca tcaaggttca gtggcagtg 1380
atctgggaca gattacactt tcaccatcag cagtctgcaa cctgaagata ttgcaactta 1440
ctactgtcaa cagtggagta gtaaccctct cacttttggc caggggacca agctgcagat 1500
cacc

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<210> 20

<211> 498

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
anti-CD3

<400> 20

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Asp Ile Gln Leu Thr Gln Ser Pro Ala Ser Leu Ala Val Ser Leu Gly
1           5           10           15

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Gln Arg Ala Thr Ile Ser Cys Lys Ala Ser Gln Ser Val Asp Tyr Asp
          20           25           30

```

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Gly Asp Ser Tyr Leu Asn Trp Tyr Gln Gln Ile Pro Gly Gln Pro Pro
          35           40           45

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Lys Leu Leu Ile Tyr Asp Ala Ser Asn Leu Val Ser Gly Ile Pro Pro
          50           55           60

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Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Asn Ile His
65           70           75           80

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Pro Val Glu Lys Val Asp Ala Ala Thr Tyr His Cys Gln Gln Ser Thr
          85           90           95

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Glu Asp Pro Trp Thr Phe Gly Gly Gly Thr Lys Leu Glu Ile Lys Gly
          100          105          110

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Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gln Val
          115          120          125

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Gln Leu Gln Gln Ser Gly Ala Glu Leu Val Arg Pro Gly Ser Ser Val
          130          135          140

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Lys Ile Ser Cys Lys Ala Ser Gly Tyr Ala Phe Ser Ser Tyr Trp Met
145 150 155 160

Asn Trp Val Lys Gln Arg Pro Gly Gln Gly Leu Glu Trp Ile Gly Gln
165 170 175

Ile Trp Pro Gly Asp Gly Asp Thr Asn Tyr Asn Gly Lys Phe Lys Gly
180 185 190

Lys Ala Thr Leu Thr Ala Asp Glu Ser Ser Ser Thr Ala Tyr Met Gln
195 200 205

Leu Ser Ser Leu Ala Ser Glu Asp Ser Ala Val Tyr Phe Cys Ala Arg
210 215 220

Arg Glu Thr Thr Thr Val Gly Arg Tyr Tyr Tyr Ala Met Asp Tyr Trp
225 230 235 240

Gly Gln Gly Thr Thr Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gln
245 250 255

Val Gln Leu Val Gln Ser Gly Gly Gly Val Val Gln Pro Gly Arg Ser
260 265 270

Leu Arg Leu Ser Cys Lys Ser Ser Gly Tyr Thr Phe Thr Arg Tyr Thr
275 280 285

Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Ile Gly
290 295 300

Tyr Ile Asn Pro Ser Arg Gly Tyr Thr Asn Tyr Asn Gln Lys Val Lys
305 310 315 320

Asp Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Ala Phe Leu
325 330 335

Gln Met Asp Ser Leu Arg Pro Glu Asp Thr Gly Val Tyr Phe Cys Ala
340 345 350

Arg Tyr Tyr Asp Asp His Tyr Cys Leu Asp Tyr Trp Gly Gln Gly Thr
355 360 365

Pro Val Thr Val Ser Ser Val Glu Gly Gly Ser Gly Gly Ser Gly Gly
370 375 380

Ser Gly Gly Ser Gly Gly Val Asp Asp Ile Gln Met Thr Gln Ser Pro
385 390 395 400

Ser Ser Leu Ser Ala Ser Val Gly Asp Arg Val Thr Ile Thr Cys Arg
405 410 415

Ala Ser Ser Ser Val Ser Tyr Met Asn Trp Tyr Gln Gln Thr Pro Gly
420 425 430

Lys Ala Pro Lys Arg Trp Ile Tyr Asp Thr Ser Lys Val Ala Ser Gly
435 440 445

Val Pro Ser Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Tyr Thr Phe
450 455 460

Thr Ile Ser Ser Leu Gln Pro Glu Asp Ile Ala Thr Tyr Tyr Cys Gln
465 470 475 480

Gln Trp Ser Ser Asn Pro Leu Thr Phe Gly Gln Gly Thr Lys Leu Gln
485 490 495

Ile Thr

<210> 21

<211> 360

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
5-10 VH

<400> 21

gaggtgcagc	tgctcgagca	gtctggagct	gagctggtaa	ggcctgggac	ttcagtgaag	60
atatcctgca	aggcttctgg	atacgccttc	actaactact	ggctaggttg	ggtaaagcag	120
aggcctggac	atggacttga	gtggattgga	gatattttcc	ctggaagtgg	taatatccac	180
tacaatgaga	agttcaaggg	caaagccaca	ctgactgcag	acaaatcttc	gagcacagcc	240
tatatgcagc	tcagtagcct	gacatttgag	gactctgctg	tctatttctg	tgcaagactg	300
aggaactggg	acgagcctat	ggactactgg	ggccaaggga	ccacggtcac	cgtctcctcc	360

<210> 22

<211> 120

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
5-10 VH

<400> 22

Glu	Val	Gln	Leu	Leu	Glu	Gln	Ser	Gly	Ala	Glu	Leu	Val	Arg	Pro	Gly
1				5					10					15	

Thr	Ser	Val	Lys	Ile	Ser	Cys	Lys	Ala	Ser	Gly	Tyr	Ala	Phe	Thr	Asn
			20					25					30		

Tyr	Trp	Leu	Gly	Trp	Val	Lys	Gln	Arg	Pro	Gly	His	Gly	Leu	Glu	Trp
		35					40					45			

Ile	Gly	Asp	Ile	Phe	Pro	Gly	Ser	Gly	Asn	Ile	His	Tyr	Asn	Glu	Lys
	50						55				60				

Phe	Lys	Gly	Lys	Ala	Thr	Leu	Thr	Ala	Asp	Lys	Ser	Ser	Ser	Thr	Ala
65					70					75					80

Tyr	Met	Gln	Leu	Ser	Ser	Leu	Thr	Phe	Glu	Asp	Ser	Ala	Val	Tyr	Phe
				85					90					95	

Cys	Ala	Arg	Leu	Arg	Asn	Trp	Asp	Glu	Pro	Met	Asp	Tyr	Trp	Gly	Gln
			100					105					110		

Gly	Thr	Thr	Val	Thr	Val	Ser	Ser
		115				120	

<210> 23

<211> 339

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
5-10 VL

<400> 23

gagctcgtga	tgacacagtc	tccatcctcc	ctgactgtga	cagcaggaga	gaaggtcact	60
atgagctgca	agtccagtca	gagtctgtta	aacagtggaa	atcaaaagaa	ctacttgacc	120
tggtaccagc	agaaaccagg	gcagcctcct	aaactgttga	tctactgggc	atccactagg	180
gaatctgggg	tccctgatcg	cttcacaggc	agtggatctg	gaacagattt	cactctcacc	240
atcagcagtg	tgcaggctga	agacctggca	gtttattact	gtcagaatga	ttatagttat	300
ccgctcacgt	tcggtgctgg	gaccaagctt	gagatcaaa			339

<210> 24
 <211> 113
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic
 5-10 VL

<400> 24
 Glu Leu Val Met Thr Gln Ser Pro Ser Ser Leu Thr Val Thr Ala Gly
 1 5 10 15

Glu Lys Val Thr Met Ser Cys Lys Ser Ser Gln Ser Leu Leu Asn Ser
 20 25 30

Gly Asn Gln Lys Asn Tyr Leu Thr Trp Tyr Gln Gln Lys Pro Gly Gln
 35 40 45

Pro Pro Lys Leu Leu Ile Tyr Trp Ala Ser Thr Arg Glu Ser Gly Val
 50 55 60

Pro Asp Arg Phe Thr Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr
 65 70 75 80

Ile Ser Ser Val Gln Ala Glu Asp Leu Ala Val Tyr Tyr Cys Gln Asn
 85 90 95

Asp Tyr Ser Tyr Pro Leu Thr Phe Gly Ala Gly Thr Lys Leu Glu Ile
 100 105 110

Lys

<210> 25
 <211> 360
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic
 3-1 VH

<400> 25
 gaggtgcagc tgctcgagca gtctggagct gagctggtga aacctggggc ctgagtgaag 60
 atatcctgca aggccttctgg atacgccttc actaactact ggctagggtg ggtaaagcag 120
 aggcctggac atggacttga gtggattgga gatcttttcc ctggaagtgg taatactcac 180
 tacaatgaga gggttcagggg caaagccaca ctgactgcag acaaatcctc gagcacagcc 240
 tttatgcagc tcagtagcct gacatctgag gactctgctg tctatttctg tgcaagattg 300
 aggaactggg acgaggctat ggactactgg ggccaaggga ccacggtcac cgtctcctcc 360

<210> 26
 <211> 120
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic
 3-1 VH

<400> 26
 Glu Val Gln Leu Leu Glu Gln Ser Gly Ala Glu Leu Val Lys Pro Gly
 1 5 10 15

Ala Ser Val Lys Ile Ser Cys Lys Ala Ser Gly Tyr Ala Phe Thr Asn
 20 25 30

Tyr Trp Leu Gly Trp Val Lys Gln Arg Pro Gly His Gly Leu Glu Trp
 35 40 45

Ile Gly Asp Leu Phe Pro Gly Ser Gly Asn Thr His Tyr Asn Glu Arg
 50 55 60

Phe Arg Gly Lys Ala Thr Leu Thr Ala Asp Lys Ser Ser Ser Thr Ala
 65 70 75 80

Phe Met Gln Leu Ser Ser Leu Thr Ser Glu Asp Ser Ala Val Tyr Phe
 85 90 95

Cys Ala Arg Leu Arg Asn Trp Asp Glu Ala Met Asp Tyr Trp Gly Gln
 100 105 110

Gly Thr Thr Val Thr Val Ser Ser
 115 120

<210> 27
 <211> 321
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic
 3-1 VL

<400> 27
 gagctcgtca tgaccagtc tccatcttat cttgctgcat ctccctggaga aaccattact 60
 attaatgtca gggcaagtaa gagcattagc aaatatttag cctggatatca agagaaacct 120
 gggaaaacta ataagcttct tatctactct ggatccactt tgcaatctgg aattccatca 180
 aggttcagtg gcagtggtac tggtacagat ttcactctca ccatcagtag cctggagcct 240

gaagatttttg caatgtatta ctgtcaacag cataatgaat atccgtacac gttcggaggg 300
 gggaccaagc ttgagatcaa a 321

<210> 28
 <211> 107
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic
 3-1 VL

<400> 28
 Glu Leu Val Met Thr Gln Ser Pro Ser Tyr Leu Ala Ala Ser Pro Gly
 1 5 10 15

Glu Thr Ile Thr Ile Asn Cys Arg Ala Ser Lys Ser Ile Ser Lys Tyr
 20 25 30

Leu Ala Trp Tyr Gln Glu Lys Pro Gly Lys Thr Asn Lys Leu Leu Ile
 35 40 45

Tyr Ser Gly Ser Thr Leu Gln Ser Gly Ile Pro Ser Arg Phe Ser Gly
 50 55 60

Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Glu Pro
 65 70 75 80

Glu Asp Phe Ala Met Tyr Tyr Cys Gln Gln His Asn Glu Tyr Pro Tyr
 85 90 95

Thr Phe Gly Gly Gly Thr Lys Leu Glu Ile Lys
 100 105

<210> 29
 <211> 372
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic
 4-7 VH

<400> 29
 gaggtgcagc tgctcgagca gtctggagct gagctggcga ggcctggggc ttcagtgaag 60
 ctgtcctgca aggccttctgg ctacaccttc acaaactatg gtttaagctg ggtgaagcag 120
 aggcctggac aggtccttga gtggattgga gaggtttatc ctagaattgg taatgcttac 180
 tacaatgaga agttcaaggg caaggccaca ctgactgcag acaaatcctc cagcacagcg 240
 tccatggagc tccgcagcct gacctctgag gactctgcgg tctatttctg tgcaagacgg 300
 ggatcctacg atactaacta cgactgggtac ttcgatgtct ggggccaagg gaccacggtc 360

accgtctcct cc

372

<210> 30

<211> 124

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
4-7 VH

<400> 30

Glu	Val	Gln	Leu	Leu	Glu	Gln	Ser	Gly	Ala	Glu	Leu	Ala	Arg	Pro	Gly
1				5					10					15	

Ala	Ser	Val	Lys	Leu	Ser	Cys	Lys	Ala	Ser	Gly	Tyr	Thr	Phe	Thr	Asn
			20					25					30		

Tyr	Gly	Leu	Ser	Trp	Val	Lys	Gln	Arg	Pro	Gly	Gln	Val	Leu	Glu	Trp
		35				40					45				

Ile	Gly	Glu	Val	Tyr	Pro	Arg	Ile	Gly	Asn	Ala	Tyr	Tyr	Asn	Glu	Lys
	50					55					60				

Phe	Lys	Gly	Lys	Ala	Thr	Leu	Thr	Ala	Asp	Lys	Ser	Ser	Ser	Thr	Ala
65					70					75					80

Ser	Met	Glu	Leu	Arg	Ser	Leu	Thr	Ser	Glu	Asp	Ser	Ala	Val	Tyr	Phe
				85					90					95	

Cys	Ala	Arg	Arg	Gly	Ser	Tyr	Asp	Thr	Asn	Tyr	Asp	Trp	Tyr	Phe	Asp
			100					105					110		

Val	Trp	Gly	Gln	Gly	Thr	Thr	Val	Thr	Val	Ser	Ser
		115					120				

<210> 31

<211> 336

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
4-7 VL

<400> 31

gagctcgtga	tgaccagac	tccactctcc	ctgcctgtca	gtcttggaga	tcaagcctcc	60
atctcttgca	gatctagtca	gagccttgta	cacagtaatg	gaaacaccta	tttacattgg	120
tacctgcaga	agccaggcca	gtctccaaag	ctcctgatct	acaaagtttc	caaccgattt	180

tctgggggtcc	cagacaggtt	cagtggcagt	ggatcagggg	cagatttcac	actcaagatc	240
agcagagtgg	aggctgagga	tctgggagtt	tatttctgct	ctcaaagtac	acatgttccg	300
tacacgttcg	gaggggggac	caagcttgag	atcaaa			336

<210> 32
 <211> 112
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic
 4-7 VL

<400> 32
 Glu Leu Val Met Thr Gln Thr Pro Leu Ser Leu Pro Val Ser Leu Gly
 1 5 10 15

Asp Gln Ala Ser Ile Ser Cys Arg Ser Ser Gln Ser Leu Val His Ser
 20 25 30

Asn Gly Asn Thr Tyr Leu His Trp Tyr Leu Gln Lys Pro Gly Gln Ser
 35 40 45

Pro Lys Leu Leu Ile Tyr Lys Val Ser Asn Arg Phe Ser Gly Val Pro
 50 55 60

Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Lys Ile
 65 70 75 80

Ser Arg Val Glu Ala Glu Asp Leu Gly Val Tyr Phe Cys Ser Gln Ser
 85 90 95

Thr His Val Pro Tyr Thr Phe Gly Gly Gly Thr Lys Leu Glu Ile Lys
 100 105 110

<210> 33
 <211> 1470
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic
 anti-CD3

<400> 33	
gagctcgtca	tgaccagtc tccatcttat cttgctgcat ctcttgagga aaccattact 60
attaattgca	gggcaagtaa gagcattagc aaatatttag cctgggtatca agagaaacct 120
gggaaaacta	ataagcttct tatctactct ggatccactt tgcaatctgg aattccatca 180
aggttcagtg	gcagtggatc tggtagagat ttcactctca ccatcagtag cctggagcct 240
gaagattttg	caatgtatta ctgtcaacag cataatgaat atccgtacac gttcggaggg 300

```

gggaccaagc ttgagatcaa aggtggtggt ggttctggcg gcggcggctc cgggtggtggt 360
ggttctgagg tgcagctgct cgagcagtcct ggagctgagc tggtgaaacc tggggcctca 420
gtgaagatat cctgcaaggc ttctggatac gccttcacta actactggct aggttgggta 480
aagcagaggg ctggacatgg acttgagtgg attggagatc ttttccctgg aagtggtaat 540
actcactaca atgagagggt caggggcaaa gccacactga ctgcagacaa atcctcgagc 600
acagccttta tgcagctcag tagcctgaca tctgaggact ctgctgtcta tttctgtgca 660
agattgagga actgggacga ggctatggac tactggggcc aagggaccac ggtcaccgtc 720
tcctccggag gtggtggatc ccaggtgcag ctggtgcagt ctgggggagg cgtggtccag 780
cctgggagggt ccctgagact ctctgtgaag tcttctggat acaccttcac taggtatacg 840
atgcactggg tccgccaggc tccaggggaag gggctggagt ggattggata cataaatcct 900
agccgtgggt atactaatta taatcagaag gtgaaggacc gattcaccat ctccagagac 960
aactccaaga acacggcctt tctgcaaatg gacagcctga gacccgagga cacgggtgtg 1020
tatttctgtg cgagatatta tgatgatcat tactgccttg actattgggg ccagggcacc 1080
ccggtcaccg tctcctcagt cgaaggtgga agtggaggtt ctggtggaag tggaggttca 1140
ggtggagtggt acgacatcca gatgaccag tctccatcct ccctgtctgc atctgtagga 1200
gacagagtca ccataccttg cagagcaagt tcaagcgtaa gctacatgaa ttggtatcag 1260
cagacaccag ggaaagccc taagagatgg atctatgaca catccaaagt ggcttctggg 1320
gtcccatcaa ggttcagtggt cagtggatct gggacagatt acactttcac catcagcagt 1380
ctgcaacctg aagatatgtc aacttactac tgtcaacagt ggagtagtaa ccctctcact 1440
tttggccagg ggaccaagct gcagatcacc 1470

```

<210> 34

<211> 490

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
anti-CD3

<400> 34

```

Glu Leu Val Met Thr Gln Ser Pro Ser Tyr Leu Ala Ala Ser Pro Gly
1           5           10           15

```

```

Glu Thr Ile Thr Ile Asn Cys Arg Ala Ser Lys Ser Ile Ser Lys Tyr
20           25           30

```

```

Leu Ala Trp Tyr Gln Glu Lys Pro Gly Lys Thr Asn Lys Leu Leu Ile
35           40           45

```

```

Tyr Ser Gly Ser Thr Leu Gln Ser Gly Ile Pro Ser Arg Phe Ser Gly
50           55           60

```

```

Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Glu Pro
65           70           75           80

```

```

Glu Asp Phe Ala Met Tyr Tyr Cys Gln Gln His Asn Glu Tyr Pro Tyr
85           90           95

```

```

Thr Phe Gly Gly Gly Thr Lys Leu Glu Ile Lys Gly Gly Gly Gly Ser
100          105          110

```

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Glu Val Gln Leu Leu Glu
 115 120 125

Gln Ser Gly Ala Glu Leu Val Lys Pro Gly Ala Ser Val Lys Ile Ser
 130 135 140

Cys Lys Ala Ser Gly Tyr Ala Phe Thr Asn Tyr Trp Leu Gly Trp Val
 145 150 155 160

Lys Gln Arg Pro Gly His Gly Leu Glu Trp Ile Gly Asp Leu Phe Pro
 165 170 175

Gly Ser Gly Asn Thr His Tyr Asn Glu Arg Phe Arg Gly Lys Ala Thr
 180 185 190

Leu Thr Ala Asp Lys Ser Ser Ser Thr Ala Phe Met Gln Leu Ser Ser
 195 200 205

Leu Thr Ser Glu Asp Ser Ala Val Tyr Phe Cys Ala Arg Leu Arg Asn
 210 215 220

Trp Asp Glu Ala Met Asp Tyr Trp Gly Gln Gly Thr Thr Val Thr Val
 225 230 235 240

Ser Ser Gly Gly Gly Gly Ser Gln Val Gln Leu Val Gln Ser Gly Gly
 245 250 255

Gly Val Val Gln Pro Gly Arg Ser Leu Arg Leu Ser Cys Lys Ser Ser
 260 265 270

Gly Tyr Thr Phe Thr Arg Tyr Thr Met His Trp Val Arg Gln Ala Pro
 275 280 285

Gly Lys Gly Leu Glu Trp Ile Gly Tyr Ile Asn Pro Ser Arg Gly Tyr
 290 295 300

Thr Asn Tyr Asn Gln Lys Val Lys Asp Arg Phe Thr Ile Ser Arg Asp
 305 310 315 320

Asn Ser Lys Asn Thr Ala Phe Leu Gln Met Asp Ser Leu Arg Pro Glu
 325 330 335

Asp Thr Gly Val Tyr Phe Cys Ala Arg Tyr Tyr Asp Asp His Tyr Cys
340 345 350

Leu Asp Tyr Trp Gly Gln Gly Thr Pro Val Thr Val Ser Ser Val Glu
355 360 365

Gly Gly Ser Gly Gly Ser Gly Gly Ser Gly Gly Ser Gly Gly Val Asp
370 375 380

Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
385 390 395 400

Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Ser Ser Val Ser Tyr Met
405 410 415

Asn Trp Tyr Gln Gln Thr Pro Gly Lys Ala Pro Lys Arg Trp Ile Tyr
420 425 430

Asp Thr Ser Lys Val Ala Ser Gly Val Pro Ser Arg Phe Ser Gly Ser
435 440 445

Gly Ser Gly Thr Asp Tyr Thr Phe Thr Ile Ser Ser Leu Gln Pro Glu
450 455 460

Asp Ile Ala Thr Tyr Tyr Cys Gln Gln Trp Ser Ser Asn Pro Leu Thr
465 470 475 480

Phe Gly Gln Gly Thr Lys Leu Gln Ile Thr
485 490

<210> 35

<211> 1498

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
anti-CD3

<400> 35

```
tgtacactcc gagctcgtga tgacacagtc tccatcctcc ctgactgtga cagcaggaga 60
gaaggtcact atgagctgca agtccagtca gagtctgtta aacagtggaa atcaaaagaa 120
ctacttgacc tggtagcagc agaaaccagg gcagcctcct aaactgttga tctactgggc 180
atccactagg gaatctgggg tccctgatcg cttcacaggc agtggatctg gaacagattt 240
cactctcacc atcagcagtg tgcaggctga agacctggca gtttattact gtcagaatga 300
ttatagttat ccgctcacgt tcggtgctgg gaccaagctt gagatcaaag gtggtggtgg 360
ttctggcggc ggcggctccg gtggtggtgg ttctgaggtg cagctgctcg agcagtctgg 420
agctgagctg gtaaggcctg ggacttcagt gaagatatcc tgcaaggctt ctggatacgc 480
```

```

cttcactaac tactggctag gttgggtaaa gcagaggcct ggacatggac ttgagtggat 540
tggagatatt ttccctggaa gtggtaatat ccactacaat gagaagttca agggcaaagc 600
cacactgact gcagacaaat cttcgagcac agcctatatg cagctcagta gcctgacatt 660
tgaggactct gctgtctatt tctgtgcaag actgaggaaac tgggacgagc ctatggacta 720
ctggggccaa gggaccacgg tcaccgtctc ctccggaggt ggtggctccc aggtgcagct 780
ggtgcagtct gggggaggcg tgggtccagcc tgggaggtcc ctgagactct cctgtaagtc 840
ttctggatac accttcacta ggtatacgat gcactgggtc cgccaggctc caggggaagg 900
gctggagtgg attggataca taaatcctag ccgtggttat actaattata atcagaaggt 960
gaaggaccga ttcaccatct ccagagacaa ctccaagaac acggcctttc tgcaaattga 1020
cagcctgaga cccgaggaca cgggtgtgta tttctgtgcg agatattatg atgatcatta 1080
ctgccttgac tattggggcc agggcacccc ggtcaccgtc tcctcagtcg aagggtggaag 1140
tggaggttct ggtggaagtg gaggttcagg tggagtggac gacatccaga tgacccagtc 1200
tccatcctcc ctgtctgcat ctgtaggaga cagagtcacc atcacttgca gagcaagttc 1260
aagcgtaagc tacatgaatt ggtatcagca gacaccaggg aaagccccta agagatggat 1320
ctatgacaca tccaaagtgg cttctggggg cccatcaagg ttcagtggca gtggatctgg 1380
gacagattac actttcacca tcagcagtc gcaacctgaa gatattgcaa cttactactg 1440
tcaacagtgg agtagtaacc ctctcacttt tggccagggg accaagctgc agatcacc 1498

```

<210> 36

<211> 496

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
anti-CD3

<400> 36

```

Glu Leu Val Met Thr Gln Ser Pro Ser Ser Leu Thr Val Thr Ala Gly
1             5             10             15

```

```

Glu Lys Val Thr Met Ser Cys Lys Ser Ser Gln Ser Leu Leu Asn Ser
20             25             30

```

```

Gly Asn Gln Lys Asn Tyr Leu Thr Trp Tyr Gln Gln Lys Pro Gly Gln
35             40             45

```

```

Pro Pro Lys Leu Leu Ile Tyr Trp Ala Ser Thr Arg Glu Ser Gly Val
50             55             60

```

```

Pro Asp Arg Phe Thr Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr
65             70             75             80

```

```

Ile Ser Ser Val Gln Ala Glu Asp Leu Ala Val Tyr Tyr Cys Gln Asn
85             90             95

```

```

Asp Tyr Ser Tyr Pro Leu Thr Phe Gly Ala Gly Thr Lys Leu Glu Ile
100            105            110

```

Lys Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser
 115 120 125

Glu Val Gln Leu Leu Glu Gln Ser Gly Ala Glu Leu Val Arg Pro Gly
 130 135 140

Thr Ser Val Lys Ile Ser Cys Lys Ala Ser Gly Tyr Ala Phe Thr Asn
 145 150 155 160

Tyr Trp Leu Gly Trp Val Lys Gln Arg Pro Gly His Gly Leu Glu Trp
 165 170 175

Ile Gly Asp Ile Phe Pro Gly Ser Gly Asn Ile His Tyr Asn Glu Lys
 180 185 190

Phe Lys Gly Lys Ala Thr Leu Thr Ala Asp Lys Ser Ser Ser Thr Ala
 195 200 205

Tyr Met Gln Leu Ser Ser Leu Thr Phe Glu Asp Ser Ala Val Tyr Phe
 210 215 220

Cys Ala Arg Leu Arg Asn Trp Asp Glu Pro Met Asp Tyr Trp Gly Gln
 225 230 235 240

Gly Thr Thr Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gln Val Gln
 245 250 255

Leu Val Gln Ser Gly Gly Gly Val Val Gln Pro Gly Arg Ser Leu Arg
 260 265 270

Leu Ser Cys Lys Ser Ser Gly Tyr Thr Phe Thr Arg Tyr Thr Met His
 275 280 285

Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Ile Gly Tyr Ile
 290 295 300

Asn Pro Ser Arg Gly Tyr Thr Asn Tyr Asn Gln Lys Val Lys Asp Arg
 305 310 315 320

Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Ala Phe Leu Gln Met
 325 330 335

Asp Ser Leu Arg Pro Glu Asp Thr Gly Val Tyr Phe Cys Ala Arg Tyr
 340 345 350

Tyr Asp Asp His Tyr Cys Leu Asp Tyr Trp Gly Gln Gly Thr Pro Val
 355 360 365

Thr Val Ser Ser Val Glu Gly Gly Ser Gly Gly Ser Gly Gly Ser Gly
 370 375 380

Gly Ser Gly Gly Val Asp Asp Ile Gln Met Thr Gln Ser Pro Ser Ser
 385 390 395 400

Leu Ser Ala Ser Val Gly Asp Arg Val Thr Ile Thr Cys Arg Ala Ser
 405 410 415

Ser Ser Val Ser Tyr Met Asn Trp Tyr Gln Gln Thr Pro Gly Lys Ala
 420 425 430

Pro Lys Arg Trp Ile Tyr Asp Thr Ser Lys Val Ala Ser Gly Val Pro
 435 440 445

Ser Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Tyr Thr Phe Thr Ile
 450 455 460

Ser Ser Leu Gln Pro Glu Asp Ile Ala Thr Tyr Tyr Cys Gln Gln Trp
 465 470 475 480

Ser Ser Asn Pro Leu Thr Phe Gly Gln Gly Thr Lys Leu Gln Ile Thr
 485 490 495

<210> 37

<211> 5

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic peptide

<400> 37

Leu Glu Trp Ile Gly
 1 5

<210> 38

<211> 10

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic peptide

<400> 38

Ser Ala Ser Ser Ser Val Ser Tyr Met Asn
1 5 10

<210> 39

<211> 7

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic peptide

<400> 39

Asp Thr Ser Lys Leu Ala Ser
1 5

<210> 40

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic peptide

<400> 40

Gln Gln Trp Ser Ser Asn Pro Phe Thr
1 5